IN THE SPECIFICATION:

Please amend the Specification as follows, using the line numbering already present in the margin of each page:

On Page 1, above line 5, please insert the following paragraphs:

--CROSS REFERENCE TO RELATED APPLICATIONS

Applicants claim priority under 35 U.S.C. §119 of German Application No. 198 43 242.9 filed on September 11, 1998. Applicants also claim priority under 35 U.S.C. <u>371</u> ~~120~~ of PCT/DE99/02956 filed on September 10, 1999. The international application under PCT article 21(2) was not published in English.

BACKGROUND OF THE INVENTION

1. Field of the Invention--

Please replace the paragraph starting on page 1, line 33 with the following paragraph:

--A suitable method for such optimization problems is the application of combinatorial and evolutionary methods (Ugi, I. et al., Chimia **51** (1997) 39 - 44). These algorithms have been employed in the past in biochemistry and active ingredient research in order to select within a time as short as possible new substances with a desired specific activity from a plurality of compounds. These principles have also been used in the meantime in the development

2

of homogenous catalysts (DE-A 197 31 990.4). In the aforementioned applications the substances to be examined are always in solution. The activity range of the desired property (e.g., catalytic activity and selectivity) is limited to a molecule whose optimal element composition and structure is to be found.--

Please replace the process step a starting on page 5, line 28 with the following paragraph, i.e. replacing the element "Ka" by the element "K":

--(a) for a catalytic reaction a number n_1 of solid catalysts of the elements of the periodic table of the elements (PTE) in the form of compounds of the formula (I)

$$\left(A_{a_1}^1 .. A_{a_i}^i\right) - \left(B_{b_1}^1 .. B_{b_j}^j\right) - \left(D_{d_1}^1 .. D_{d_k}^k\right) - \left(T_{t_1}^1 .. T_{t_l}^l\right) - O_p \qquad (I)$$

are prepared, wherein A^1 .. A^i are i different main components which are selected from the elements of the PTE, except trans uranium and noble gas elements, preferably of the group

Mg, Ca, Sr, Ba, Y, La, Ti, Zr, V, Nb, Cr, Mn, Tc, Re, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, B, Al, Ga, In, C, Si, Sn, Pb, N, P, As, Sb, Bi, S, Se, Te, F, Cl, Ce and Nd and the number i is between 1 and 10,

B^1 .. B^j are j different minor components selected from the group of the elements

3

Li, Na, ~~Ka~~ K̲, Mg, Ca, Sr, Ba, Y, La, Ti, Zr, V, Nb, Cr, Mn, Tc, Re, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, B, Al, Ga, In, C, Si, Sn, Pb, N, P, As, Sb, Bi, S, Se, Te, F, Cl, Ce and Nd and the number j is between 1 and 10,

D^1 .. D^k are k different doping elements which are selected from the group of the elements

Li, Na, ~~Ka~~ K̲, Mg, Ca, Sr, Ba, Y, La, Ti, Zr, V, Nb, Cr, Mn, Tc, Re, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, B, Al, Ga, In, Si, Sn, Pb, N, P, As, Sb, Bi, S, Se, Te, F, Cl, Ce and Nd and the number k is between 1 and 10,

T^1 .. T^l are l different support components which are comprised of oxides, carbonates, carbides, nitrides, borides of the elements Mg, Ca, Sr, Ba, La, Zr, Ce, Al, Si or a mixed phase of two or more thereof, and the number l is between 1 and 10,

and O is oxygen,

a_1..a_i are identical or different mole fractions of 0 to 100 mole-% with the provision that the mole fractions a_1..a_i cannot all at the same time be 0,

b_1 .. b_j are mole fractions of 0 to 90 mole-%, preferably 0 to 50 mole-%,

d_1 .. d_k are mole fractions of 0 to 10 mole-%,

t_1 .. t_l are mole fractions of 0 bis 99.99 mole-%,

p is a mole fraction of 0 to 75 mole-%, wherein the sum of all mole fractions $a_i + b_j + d_k + t_l$ may be not greater than 100 %, and

4

the number n_1 of catalysts with different weight composition and/or different chemical composition is in the range of 5 to 100,000, preferably in the range of 5 to 100;--